

Attorney Docket No.: 960296.95360  
Applicant: Ronald T. Raines  
Application No.: 09/234,028 Filed: 01/20/1999  
Group Art Unit: 1652  
Examiner: Richard G. Hutson  
Reply to Office Action dated: September 24, 2007  
Response dated: October 31, 2007

#### REMARKS

Claims 1-7, 9, 10 and 15-17 are pending. By a final Office Action dated September 24, 2007, the Examiner in charge of this application rejected Claims 1-7, 9, 10 and 15-17 under 35 U.S.C. §§ 112 (first and second paragraphs) and 102. Applicant responds to each of the Examiner's rejections below.

In view of the amendments noted above and the remarks presented herein, applicant respectfully requests reconsideration of the merits of this application. A Request for Continued Examination accompanies this response.

#### Claim Amendments

Claims 1, 4, 5, 7 and 9 are amended and Claims 2, 3, 6 and 10-17 are cancelled without prejudice to filing continuing applications on the disclosed but unclaimed subject matter in the application. Claims 2, 3, 6, 10, and 15-17 are newly cancelled in this response. Claims 18-20 are newly added in this response.

The now-pending claims affirmatively recite a finite number of structurally defined oxidation-resistant engineered ribonuclease inhibitor (RI) variants, by reciting that the structure of each claimed variant "consists of" defined differences from an otherwise intact reference sequence, namely alanine residues in at least one of the recited positions. The recited positions coincide with cysteine residues in the indicated reference sequences.

New Claims 18-20 are presented for examination. Claims 18 and 20 each specifically claims one of the sets of variants presented in Markush format in Claim 1. New dependent Claim 19 further specifies that two of the four recited residues of SEQ ID NO:3 are alanine residues.

Support for the amended claims and new claim is found throughout the specification, for example at pages 13-15 and Figures 3-6. No new matter is added. As such, no new search is required in reviewing and reconsidering the claims presented herein. Based on these amendments, applicant respectfully request reconsideration of the rejections.

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Claim Rejections - 35 U.S.C. § 112

Claim 16 was rejected for indefiniteness under 35 USC 112, second paragraph. The rejection is moot as Claim 16 is cancelled.

Claims 1-7, 9, 10 and 15-17 were rejected under 35 USC 112, first paragraph as containing subject matter which was allegedly not described in the specification. The Examiner asserted that two species are insufficient to adequately describe the genus of claims which includes any and all such RI variants. The rejection is moot as to cancelled Claims 2, 3, 6, 10, and 15-17. Reconsideration of the rejection of Claims 1, 4, 5, 7 and 9 is respectfully requested in view of the aforementioned amendments to Claim 1.

The Examiner also rejected Claims 1-7, 9, 10, 15 and 17 under 35 U.S.C. § 112, first paragraph, for failing to meet the enablement requirement, alleging that the claims are directed to the "means by which" the final product is obtained rather than to the RI variant. The rejection is moot as to cancelled Claims 2, 3, 6, 10, 15 and 17. Reconsideration of the rejection of Claims 1, 4, 5, 7, and 9 is respectfully requested in view of the aforementioned amendments which refer specifically and unambiguously to the structures of claimed variants.

Claims Rejections - 35 U.S.C. § 102

The Examiner rejected Claims 1-7, 9, 10, 15 and 17 under 35 USC 102(b) as being anticipated by Blázquez M, *et al.*, "Oxidation of sulphhydryl groups of ribonuclease inhibitor in epithelial cells is sufficient for its intracellular degradation," *J. Biol. Chem.* 271:18638-18642 (1996). The Examiner admitted that Blázquez *et al.* do not teach the human RI (i.e., SEQ ID NO:3), yet asserted that the porcine RI meets all of the structural limitations of the claimed RI variant. Applicant respectfully disagrees. The rejection is moot as to cancelled Claims 2, 3, 6, 10, and 15-17.

Blázquez *et al.* fails to disclose each and every element set forth in the claims as required by MPEP §2131. Blázquez *et al.* also fails to enable how to make and use the claimed oxidation resistant RI variants. Blázquez *et al.* only show that cysteine residues of porcine RI can be

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oxidized intracellularly, which caused inactivation and disappearance of the RI from cells. Blázquez makes no structural alteration to porcine RI. Blázquez does not disclose an oxidation resistant RI variant having the specified structural requirements of the claimed variants. Indeed, Blázquez does not disclose any amino acid substitution in a ribonuclease inhibitor. As such, Blázquez *et al.* cannot anticipate the pending claims. In view of these remarks and the amendments noted above, applicant respectfully requests reconsideration of this rejection as applied to pending Claims 1, 4, 5, 7, and 9.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone applicant's attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

For the reasons stated above, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

#### Fees

A Request for Continued Examination (RCE) accompanies this response. Please charge the fees for the RCE to Deposit Account No. 17-0055. No extension fees are believed due. Should any other fees be due, in this or any subsequent response, please consider this to be a petition for the appropriate fees and a request to charge such fees as needed to Deposit Account No. 17-0055.

Respectfully submitted,



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